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METHODOLOGICAL ISSUES

LAND USE, LAND-USE CHANGE AND FORESTRY: DEFINITIONS AND MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION ACTIVITIES UNDER ARTICLE 12 OF THE KYOTO PROTOCOL

A cross-referenced overview of decisions and issues

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. The Conference of the Parties (COP), by its decision 17/CP.7, requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to develop definitions and modalities for including afforestation and reforestation project activities under the clean development mechanism (CDM) in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to decision -/CMP.1 (*Land use, land-use change and forestry*) with the aim of adopting a decision on these definitions and modalities at the ninth session of the COP, to be forwarded to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) at its first session (FCCC/CP/2001/13/Add.2).

2. At its sixteenth session, the SBSTA agreed on terms of reference and the agenda for the work referred to in paragraph 1 above. In this context, it requested the secretariat to prepare a note cross-referencing decisions 11/CP.7, 17/CP.7, 19/CP.7, 22/CP.7 and 23/CP.7 to the issues and aspects of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, as well as accounting, reporting and review aspects (FCCC/SBSTA/2002/6). It also requested Parties and other organizations to provide views on issues related to modalities for including afforestation and reforestation project activities under the CDM in the first commitment period by 20 August 2002.

B. Scope of the note

3. This note identifies the relation between the decisions and issues by means of cross-referencing tables. The cells in the tables indicate all the paragraphs containing references to the decisions. A separate table was made for each decision. It is anticipated that these tables will assist Parties in preparing the submissions of views referred to above.

4. Parties should be aware of the possible linkages not covered in this note, between the work of the Intergovernmental Panel on Climate Change (IPCC) and the CDM executive board, and the issues and aspects identified in the SBSTA terms of reference. For example, in accordance with decision 17/CP.7, in the framework of the prompt start of the CDM, the executive board is currently further clarifying issues related to the modalities and procedures, in particular, appendices B and C to decision 17/CP.7. Also, in accordance with decision 11/CP.7, subparagraphs 3 (a) and (b), the IPCC is currently elaborating methods to estimate, measure, monitor and report changes in carbon stocks and anthropogenic greenhouse gas emissions resulting from land use, land-use change and forestry (LULUCF). The IPCC is also preparing a report on good practice guidance and uncertainty management for the LULUCF sector.

C. Possible action by the SBSTA

5. The SBSTA may wish to take note of the information contained in this note and the information provided by Parties and other organizations. It may also wish to provide further guidance to the secretariat on this issue.

II. OVERVIEW OF DECISIONS, DRAFT DECISIONS (-/CMP) AND ANNEXES THERETO

6. Decision 11/CP.7 (Land use, land-use change and forestry) includes a draft decision recommended for consideration by the COP/MOP at its first session, as well as an annex thereto entitled "Definitions, modalities, rules and guidelines relating to land use, land-use change and forestry activities under the Kyoto Protocol". The annex sets forth definitions for forest and agreed LULUCF activities

under Article 3, paragraphs 3 and 4; modalities, rules and guidelines for LULUCF activities under Article 3, paragraphs 3 and 4, and Article12; and general issues related to the application of a forest definition, to accounting, to lands, to national inventories and to carbon pools (FCCC/CP/2001/13/Add.1).

7. Decision 17/CP.7 (Modalities and procedures for a clean development mechanism, as defined in Article 12 of the Kyoto Protocol) includes a draft COP/MOP decision containing an annex entitled "Modalities and procedures for a clean development mechanism". The annex is divided into 10 sections on: definitions, the role of the COP/MOP to the Kyoto Protocol, the executive board, the accreditation and designation of operational entities, designated operational entities, participation requirements, validation and registration, monitoring, verification and certification, and issuance of certified emission reductions. In addition, there are four appendices to the annex which relate to standards for the accreditation of operational entities, the project design document, terms of reference for establishing guidelines on baselines and monitoring methodologies, and clean development mechanism registry requirements (FCCC/CP/2001/13/Add.2).

8. Decision 19/CP.7 (Modalities for accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol) includes a draft COP/MOP decision containing an annex entitled "Modalities for accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol". The annex is divided into three sections on modalities, registry requirements, and compilation and accounting of emission inventories and assigned amounts (FCCC/CP/2001/13/Add.2).

9. Decision 22/CP.7 (Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol) includes an appendix and a draft COP/MOP decision with an annex. The appendix is divided into two sections, namely, "Reporting of supplementary information under Article 7, paragraph 1", and "Reporting of supplementary information under Article 7, paragraph 2". The annex to the draft COP/MOP decision is divided into four sections: "Reporting of supplementary information under Article 7, paragraph 1"; "Reporting of supplementary information under Article 7, paragraph 2"; "Language"; and "Updating" (FCCC/CP/2001/13/Add.3 and Corr.1).

10. Decision 23/CP.7 (Guidelines for review under Article 8 of the Kyoto Protocol) includes two appendices and a draft COP/MOP decision. Appendix I to decision 23/CP.7 includes draft decisions relevant to part III (Review of information on assigned amounts pursuant to Article 3, paragraphs 7 and 8, emission reduction units, certified emission reductions, assigned amount units and removal units) and part V (Review of national registries) of the guidelines for review under Article 8 of the Kyoto Protocol. Appendix II is entitled "Review for reinstatement of eligibility to use mechanisms". The annex to the draft COP/MOP decision is entitled "Guidelines for review under Article 8 of the Kyoto Protocol" and is divided into seven parts: I: "General approach to review"; II: "Review of annual inventories"; III:[1] "Review of information on assigned amounts pursuant to Article 3, paragraphs 7 and 8, emission reduction units, certified emission reductions, assigned amount units and removal units"; IV: "Review of national systems"; V:[2] "Review of national registries"; VI: "Review of information on the minimization of adverse impacts in accordance with Article 3, paragraph 14"; and VII: "Review of national communications and information on other commitments under the Kyoto Protocol" (FCCC/CP/2001/13/Add. 1).

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[1] This part appears without adopted text. Text in brackets indicates that, according to paragraph 13 of decision 23/CP.7, text will be incorporated in this part.

[2] See footnote 1.

III. OVERVIEW OF ISSUES

A. Non-permanence

11. The term "non-permanence" is not defined in any of the decisions cited above. The term is used to refer to the temporary nature of removals by sinks from LULUCF activities. The first references to the issue of non-permanence appear in decision 11/CP.7, paragraph 2 (e) and decision 17/CP.7, paragraph 10 (b).

12. Paragraph 1 (g) of draft decision -/CMP.1 (*Land use, land-use change and forestry*) affirms that the reversal of any removal due to LULUCF activities be accounted for at the appropriate point in time. In addition, paragraph 1 (c) of the same decision affirms that the aim stated in Article 3, paragraph 1, of the Kyoto Protocol not be changed by accounting for LULUCF activities.

B. Additionality

13. In accordance with decision 17/CP.7, annex, paragraph 43, a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.

14. Paragraph 37 (d) of the same annex links the concept of additional reductions to baselines, leakage, crediting period and project boundaries. Additionality is also referred to in the verification and certification stage of the CDM project cycle (paragraph 62 (f)), as part of the project design document (paragraph 2 of appendix B to the annex) and on the terms of reference for establishing guidelines on baselines and monitoring methodologies (paragraph (a)(v) of appendix C).

C. Leakage

15. In accordance with decision 17/CP.7, annex, paragraphs 50 and 59, reductions of anthropogenic emissions by sources shall be adjusted for leakage. Leakage is defined in paragraph 51 of that annex as the net change of anthropogenic emissions of greenhouse gases by sources which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity.

D. Uncertainties

16. There is no definition of uncertainty in any decision of the UNFCCC. However, the term "uncertainty" appears in the IPCC "*Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*", and is endorsed in draft decision -/CMP.1 (*Article 5.2*), paragraph 1.

17. By its decision 11/CP.7, paragraph 3 (b), the COP invited the IPCC to prepare a report on good practice guidance and uncertainty management relating to the measurement, estimation, assessment of uncertainties, monitoring and reporting of net carbon stock changes and anthropogenic greenhouse gas emissions by sources and removals by sinks in the land use, land-use change and forestry sector. Draft decision -/CMP.1 (*Land use, land-use change and forestry*), paragraph 2, states that good practice guidance, and methods to estimate, measure, monitor and report changes in carbon stocks and anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from land use, land-use change and forestry activities, as developed by the IPCC, shall be applied by Parties, if decided in accordance with relevant decisions of the COP and the COP/MOP.

18. In the decision 17/CP.7, annex, uncertainties are referred as an issue relating to the establishment of baselines. The monitoring section of this annex further mentions the need for ensuring quality assurance and control procedures for the monitoring process.

E. Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems

19. According to draft decision -/CMP.1 (*Land use, land-use change and forestry*), paragraph 1 (e), LULUCF activities shall contribute to the conservation of biodiversity and to the sustainable use of natural resources.

20. Decision 17/CP.7, annex, paragraph 37 (c), refers to "environmental impacts" as a validation requirement, which shall be monitored in accordance with paragraph 53 (d).

21. The same annex provides for the possibility of comments by stakeholders prior to validation (paragraph 37 (b)), at the moment of validation (paragraph 40 (a)) and, as appropriate, at the verification stage (paragraph 62 (b)).

F. Accounting, reporting and review aspects

22. In the annexed tables, the column entitled "Accounting, reporting and review aspects" includes both accounting, reporting and review aspects arising from Parties' obligations under decisions 11/CP.7, 19/CP.7, 22/CP.7 and 23/CP.7, as well as accounting, reporting and review aspects for CDM project activities, mainly addressed in decision 17/CP.7.

Annex

CROSS-REFERENCING TABLES

Table 1. Cross-referencing of issues/aspects to decision 11/CP.7 (Land use, land-use change and forestry)

Decision 11/CP.7	Issues	Non-permanence	Additionality	Leakage	Uncertainties	Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems	Accounting, reporting and review aspects
	Decision 11/CP.7	Para. 2 (e)	Para. 2 (e)	Para. 2 (e)	Paras. 2 (e), and 3 (a) and (b)	Para. 2 (e)	Para. 3 (a)
	Draft decision -/CMP.1 (LULUCF)	Para. 1 (c) and (g)	Para. 1 (d)		Paras. 1 (a) and (b), and 2	Para. 1 (e)	Paras. 1, 2 and 3
	Annex: Article 12 (paras. 13-15)						Para. 14

Table 2. Cross-referencing of issues/aspects to decision 17/CP.7 (Modalities and procedures for a clean development mechanism, as defined in Article 12 of the Kyoto Protocol)

	Issues	Non-permanence	Additionality	Leakage	Uncertainties	Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems	Accounting, reporting and review aspects
Decision 17/CP.7	**Decision 17/CP.7**	Para. 10 (b)	Para. 10 (b)	Para. 10 (b)	Para. 10 (b)	Para. 10 (b)	Para. 7 (a) - (b)
	Draft decision -/CMP.1 (CDM)						
	Annex: Definitions (para. 1)					Para. 1 (e)	Para. 1 (a)-(d)
	Annex: Participation requirements (paras. 28-34)						Paras. 31 and 32
	Annex: Validation and registration (paras. 35-52)		Paras. 37 (d), 43 and 44	Paras. 50, 51 and 52	Para. 45 (b)	Comments by stakeholders Paras. 37 (b), 40 (b) and (c) Environmental impacts Para. 37 (c)	Paras. 44, 45, 47, 48 and 52
	Annex: Monitoring (paras. 53-60)		Paras. 53 (f) and (g) and 59	Paras. 53 (c), (f) and (g) and 59	Paras. 53 (e), 54 and 57	Para. 53 (d)	Paras. 53-60
	Annex: Verification and certification (paras. 61-63)		Paras. 62 (f) and 63	Para. 62 (f)	Paras. 62 (b), (c) and (d)	Para. 62 (b)	Paras. 61-63
	Annex: Issuance of certified emission reductions (paras. 64-66)		Para. 64				Para. 66
	Appendix B: Project design document		Paras. 2 (d) and 2 (i) (vii)	Paras. 2 (i) (ii) bullet 4 and 2 (i) (v)	Paras. 2 (b) (ii) bullet 2, 2 (i) and 2 (h)	Comments by stakeholders Para. 2 (g) Environmental impacts Para. 2 (e)	All
	Appendix C: Terms of reference for establishing guidelines on baselines and monitoring methodologies		Para. (a) (v)	Para. b (vi)	Para. (a) (iii)		All
	Appendix D: Clean development mechanism registry requirements						All

Table 3. Cross-referencing of issues/aspects to decision 19/CP.7 (Modalities for accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol)

	Issues	Non-permanence	Additionality	Leakage	Uncertainties	Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems	Accounting, reporting and review aspects
Decision 19/CP.7	Draft decision -/CMP.1, annex: Definitions (paras. 1- 4)						Para. 1 (b)
	Annex: Additions to, and subtractions from, assigned amount pursuant to Article 3, paras. 7 and 8, for the accounting of the compliance assessment (paras. 11-12)						Paras. 11 and 12
	Annex: Basis for the compliance assessment (paras. 13-14)						Paras. 13 and 14
	Annex: Carry over (paras. 15-16)						Para. 15
	Annex: National registries (paras. 17-22)						Paras. 17 and 19
	Annex: Transfer, acquisition, cancellation, retirement and carry over (paras. 30-37)						Paras. 30 - 37
	Annex: Transaction procedures (paras. 38-43)						Section D
	Annex: Publicly accessible information (paras. 44-48)						Para. 47 (a) and (l)
	Annex: Report upon expiration of the additional period for fulfilling commitments (para. 49)						Para. 49 (a) - (c)
	Annex: Compilation and accounting database (paras. 50-60)						Para. 51
	Annex: Compilation and accounting reports (paras. 61-62)						Para. 62

Table 4. Cross-referencing of issues/aspects to decision 22/CP.7 (Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol)

Decision 22/CP.7	Issues	Non-permanence	Additionality	Leakage	Uncertainties	Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems	Accounting, reporting and review aspects
	Appendix: Reporting of supplementary information under Article 7.1: Information on ERU, CER, AAU and RMU (paras. 1 and 2)						Para. 1
	Appendix: Reporting of supplementary information under Article 7.2: National registries (para. 3)						Para. 3

Table 5. Cross-referencing of issues/aspects to decision 23/CP.7 (Guidelines for review under Article 8 of the Kyoto Protocol)

Decision 23/CP.7	Issues	Non-permanence	Additionality	Leakage	Uncertainties	Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems	Accounting, reporting and review aspects
	Appendix I: Part III, Review of information on assigned amounts pursuant to Article 3, paragraphs 7 and 8, ERU, CER, AAU and RMU (paras. 1-7)						Paras. 1, 2, 5 (c), and 7 (a) and (b)
	Appendix I: Part V, Review of national registries (paras. 8-18)						Paras. 10, and 12 (c), (d) and (e)

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METHODOLOGICAL ISSUES

REVIEW OF METHODOLOGICAL WORK UNDER THE CONVENTION AND THE KYOTO PROTOCOL

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. The United Nations Framework Convention on Climate Change notes the importance of methodological work in several specific articles, for example, Articles 4.1 (a), 4.1 (f), 4.2 (c), 7.2 (d), 9.2 (e) and 12.1 (a). More generally, the Convention contains broad requirements for Parties to exchange information; these implicitly require the development of guidelines, modalities and rules. Numerous decisions have been adopted to implement these articles, beginning with decisions 4/CP.1 and 6/CP.1. Article 8.1 of the Convention also requires the secretariat to prepare reports on its activities and present them to the Conference of the Parties.

2. The Kyoto Protocol makes references to the need for methodologies (guidelines, modalities and rules) in Articles 3, 5, 6, 7, 8, 10, 12 and 17.

B. Purpose and scope of the note

3. The primary purpose of this document is to inform Parties about methodological activities underway by the Subsidiary Body for Scientific and Technological Advice (SBSTA), the Subsidiary Body for Implementation (SBI) and the secretariat. It also identifies activities being undertaken by the Executive Board of the clean development mechanism (CDM).[1]

4. Possible future negotiations on the Convention and the Kyoto Protocol may require technical information to guide decision-making. In the past, Parties have undertaken their own analyses. This paper does not specifically address methods that may be needed for future negotiations.

5. The secretariat hopes that the document will stimulate consideration of the long-term needs of the Convention in the area of methodologies. The document is intended to be comprehensive, that is, to cover all relevant topics. It is, however, not complete, in so far as the secretariat recognizes that numerous activities are being undertaken by Parties and international organizations, about which its information is incomplete.

6. No attempt has been made to analyse the adequacy of the current activities or to chart a course for future work. In some instances, the Conference of the Parties (COP) has identified a strategic direction by its decisions. In other cases, the priority and direction of activities are less clear.

C. Possible actions by the Subsidiary Body for Scientific and Technological Advice

7. The SBSTA may wish to review the scope of current work and consider the long-term needs of the Convention and its Kyoto Protocol for methodologies, and determine whether a more comprehensive and strategic approach should be developed for work in this area, and/or consider providing guidance for specific activities. In so doing, the SBSTA may wish to be guided by information from communications from Parties included in Annex I (Annex I Parties) and Parties not included in Annex I (non-Annex I Parties), and consult accordingly with the SBI.

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[1] The Executive Board of the clean development mechanism is expected to report directly to the Conference of the Parties at its eighth session. Information on methodological activities of the CDM Executive Board therefore is included only for the sake of completeness. The modalities for collaboration between the Executive Board of the CDM and the SBSTA on methodological and scientific issues have not yet been determined as required by decision 17/CP.7.

II. BACKGROUND

A. Relevant decisions of the COP and conclusions of the SBSTA

8. The COP, at its first session, by its decision 4/CP.1, decided, inter alia, that the SBSTA, drawing on the advice of existing competent international bodies should:

(a) Provide advice to the COP and to the SBI on further development, refinement, improvement and use of comparable methodologies;

(b) Propose a work plan and timetable for longer-term activities relating to methodological questions (including inventory methodologies and methodologies for analysing impacts and mitigation options);

(c) Take into account ongoing work in governments and international organizations, including the International Maritime Organization and the International Civil Aviation Organization, address the issue of the allocation and control of emissions from international bunker fuels, and report on this work to the COP at its second session (FCCC/CP/1995/7/Add.1).

9. Also at its first session, the COP adopted decision 5/CP.1 on activities implemented jointly under the pilot phase, which inherently requires the development of methods to be used in reporting such activities.

10. In response to decision 4/CP.1, the SBSTA, at its fourth session, considered a note prepared by the secretariat that proposed areas of work (FCCC/SBSTA/1996/16) and concluded that in addition to improving methods for estimating and reporting greenhouse gas (GHG) inventories, methods for the following topics should initially be given a priority in the context of the Convention:[2,3]

(a) Assessing mitigation policies and measures;

(b) Assessing adaptation options;

(c) Projecting emissions;

(d) Evaluating and monitoring the effectiveness and effects of specific policies and measures to limit or enhance removals of greenhouse gases;

(e) Assessing mitigation and adaptation techno' gies;

(f) Assessing the impacts of climate change;

(g) Socio-economic cost benefit analyses of adaptation options and mitigation policies and measures.

11. When the above list was developed the primary need for methodologies was to support the national communication process of Annex I and non-Annex I Parties. There are, however, other methods that are of critical importance to the long-term policy needs of the Convention that are not on this initial list, for example, methods to assess different mitigation pathways and their environmental consequences.

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[2] See document FCCC/SBSTA/1996/20 for the definitions of these topics. It should also be noted that at its sixth session, the SBSTA gave further guidance concerning the methodological work to be conducted during the biennium 1998–99 (FCCC/SBSTA/1997/6).

[3] The Kyoto Protocol also requires an indication that each Party to the Protocol shall have made demonstrable progress in achieving its commitments by 2005. New methods may or may not be needed on this subject.

12. In the past five years, the most important "new" requirement for methodological information emerged from agreement on the Kyoto Protocol. It creates new methodological needs relating to projects as reflected in Articles 6 and 12, reporting in the area of land-use, land-use change and forestry under Article 3.3 and 3.4, the use of emission trading under Article 17, creation of registries under Article 7.4 , new methods to estimate adjustments under Article 5.2, and reporting of information by Annex I Parties relating to how they are striving to minimize adverse effects on developing country Parties under Article 3.14.[4]

B. What have the SBSTA and the SBI done?

13. In responding to the above mandates, the SBSTA and the SBI have done two things: collect and encourage the sharing of information, and recommend guidelines on reporting of information for adoption by the COP. The SBSTA has generally not provided advice or engaged directly in activities to develop, refine and improve methods as stipulated in decision 4/CP.1. Aspects of some methods have been tested, for example, reporting formats for GHG inventories, but rigorous testing, evaluations or comparisons of most methods have generally not been undertaken directly by the SBSTA.

14. The collection of information has been done via submissions from Parties and international organizations, workshops and the web site of the secretariat. The sharing and dissemination of information has been done through official UNFCCC documents and via the web site of the secretariat. International organizations have published and distributed publications using their own channels. The general goal has been to further the use of methods by Parties, particularly in the preparation of national communications.[5]

15. In a few instances, the SBSTA invited other international bodies and United Nations organizations to develop or compile information about methods for use by Parties. The Intergovernmental Panel on Climate Change (IPCC), the United Nations Environment Programme (UNEP) and the United Nations Industrial Development Organization (UNIDO) have responded to such requests (FCCC/SBSTA/1997/16) and have prepared guidelines for reporting GHG inventories, good practice guidance on GHG inventories, methods for climate change impact assessment and adaptation strategies, methods for assessing mitigation policies and measures, and methods for assessing industrial technologies.

16. A description of activities currently underway in each area of work is presented in the annex to this document. The annex covers areas identified by the SBSTA in 1996, as expanded by subsequent decisions. Some areas require specific products to be completed by COP 8, COP 9 or the first or second COP/MOP; others have goals that are not as well defined.

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[4] Examples of important decisions relating to methodological activities include: on the adoption of the Kyoto Protocol (decisions 1/CP.3 and 2/CP.3); on guidelines for reporting GHG inventories by Annex I Parties (decision 3/CP.5 and 6/CP.5); for reporting information on systematic observation (decision 5/CP.5); on national communications from non-Annex I Parties (decision 7/CP.5 and 8/CP.5); on Articles 4.8 and 4.9 of the Convention (decisions 3/CP.3, 5/CP.4, 12/CP.5 and 5/CP.7); on developing guidelines for reporting ways to minimize the adverse effects of policies and measure on developing country Parties under Article 3.14 (decision 9/CP.7); on good practices in policies and measure (decision 13/CP.7), on activities implemented jointly (decision 10/CP.3); on land-use, land-use change and forestry (decisions 9/CP.4, 16/CP.5, 11.CP.7 and 17/CP.7); on the clean development mechanism (decision 17/CP.7); and on emission trading (decision 18/CP.7).

[5] At its seventeenth session, the SBSTA will consider an approach to training expert reviewers for Annex I GHG inventory review teams, an undertaking which will build capacity to use methods to estimate and report GHG inventories (FCCC/SBSTA/2002/INF.18).

III. DISCUSSION

A. Generic issues

17. Over the past few years, considerable progress has been made in developing methodological products in several areas, namely guidelines for estimating and reporting GHG inventories by Annex I Parties and for reporting information on activities implemented jointly under the pilot phase. These have resulted in improvements in the quality and quantity of information submitted by Parties. In other areas, Parties have benefited from exchanges of information, for example on methods to assess impacts of and vulnerability to climate change, but because these activities have not produced well-defined products, the results are less tangible and more difficult to identify. In yet other cases, for example, methodological work under the CDM, activities are just starting under the guidance of the Executive Board.

18. These different stages of development are common to methodological work. The state of the art often differs among areas. Also, methods are frequently in a state of flux, that is, undergoing a process of testing, refinement, improvement and dissemination.

19. Given the number of methodological areas and limited resources, the SBSTA may wish to consider various strategic questions, bearing in mind what could be done at the national level. Should the list of methodological areas reflected in the annex be expanded? If so, what areas of work should be added? What should be the main areas of work over the next 5–8 years? Should the SBSTA proactively promote the development, refinement, and improvement of methods and/or focus on the dissemination of information about methods? Should more testing and analysis of methods be done to guide future work? What should be the specific focus of work in each area? How can activities of the SBSTA be made more coherent with those of the SBI, particularly in the area of impacts of climate change and effects of measures?

20. Having considered the above questions, the SBSTA may also wish to determine whether there is a need to develop a long-term work programme in selected areas and if so, in which ones? In addition, the SBSTA could consider what organizations should be encouraged to undertake work, in what areas, and how to support such work.

B. Topics that may warrant special consideration

1. Greenhouse gas inventories

21. It has been nearly 10 years since work on the GHG emission guidelines was first initiated by the Organisation for Economic Co-operation and Development (OECD) and later revised and adopted by the IPCC in 1996. Presently, the IPCC is considering whether the guidelines should be revised further, having decided to hold a small expert meeting later in 2002 to consider relevant issues. Given the possible needs of the Convention in the coming 5–10 years for methods to estimate or measure emissions, the availability of new technical information and the time needed to revise the IPCC Guidelines, should the IPCC be encouraged to initiate a process to revise the greenhouse gas inventory guidelines? What guidance or advice should be given to the IPCC?

22. In considering this issue, the SBSTA may wish to note that neither the UNFCCC GHG expert review teams nor the secretariat have compared/analysed the efficacy of methods used by Annex I Parties. Their work is focused on determining whether Parties have followed the Common Reporting Format (CRF) and the IPCC GHG inventory methods and Good Practice Guidance. However, for a given sector, some Parties use complex models whereas others use relatively simple calculations to develop estimates. Further analysis of methods used by Parties in several key sectors may provide insights that could guide future work by IPCC. If desired, it may be useful to start such work in advance of the development of new guidelines, building upon the experience gained in using the CRF and that of

the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention.

23. The SBSTA may also wish to consider the level of accuracy that will be needed by GHG inventory methods under the Convention in 5–10 years. For Parties to the Protocol, this may need to include an assessment of the accuracy of inventory data relative to emission reduction units (ERU) and certified emission reductions (CER). In the near-term, the issue of accuracy also needs to be kept in mind by the CDM Executive Board as it reviews proposed methodologies under the CDM, because its decisions may indirectly affect options for future GHG inventory guidelines. It may make little sense to require costly methods with one level of accuracy for projects and less costly methods with a different level of accuracy for GHG inventories, or vice versa, given their relative contribution to meeting commitments under the Kyoto Protocol.

24. Additional data analysis might also help to guide future revisions of the IPCC guidelines. For example, an assessment is needed of the minimum amount of data needed to judge the implementation of commitments. Also, further comparisons of default estimates and national methodologies used to assess the trends of different gases and the accuracy of inventories could provide insights into the benefits to be gained by introducing new IPCC guidelines. See document FCCC/SBSTA/1999/INF.2 (paras. 27–40) for preliminary information on the later topic.

2. Projections of greenhouse gas emissions and removals by sinks

25. The current guidelines for the preparation of national communications by Annex I Parties (FCCC/CP/1999/7) do not specify the use of particular method to make projections of GHG emissions from sources and removals by sinks. As a result, Parties use different methods, giving particular attention to CO_2 from the energy sector. However, in the future, projections of GHGs from other sectors, such as the land use, land-use change and forestry sector, may become increasingly important. Sectors that are growing particularly fast, such as, the industrial sector or emissions from international aviation and marine bunkers, may also be of interest (see document FCCC/SBSTA/2002/INF.13).

26. Heretofore, the secretariat has compiled information on projections of GHG emissions in the national communications of Annex I Parties and from other sources (FCCC/TP/2001/1). It has not attempted to develop independent projections, preferring to leave this to other organizations. Also, it has not undertaken an in-depth evaluation of projections made by Parties.

27. Future revisions of the guidelines mentioned above are not likely to require the use of a particular method because of differing national circumstances. However, given the need for information to assess future climate changes, the SBSTA may wish to consider how future projections of national emissions and removals by sinks could be improved, that is, made more transparent, consistent, complete and comparable. Would efforts to exchange information among Parties about key assumptions and methods lead to improved projections? Should certain sectors be given more attention than others, and if so, which ones? What should be the nature of the work of the secretariat and other organizations?

3. Assessing policies and measures

28. Parties generally face two issues relating to the use of methods to evaluate policies and measures. First, they need methods to choose among policies before deciding to implement a policy. These are *ex-ante* methods and are used by Parties to estimate the emission reductions resulting from policies and measures. In some cases they are the same methods used to project emissions at the sector level. Second, Parties need methods to *ex post* evaluate the effectiveness and the effects of a policy after it has been implemented, including the impacts on developing countries. Did the policy do what it was designed to do? Developing/applying methods to answer this latter question has been and remains particularly challenging.

29. The SBSTA, at its seventeenth session, will consider what further activities should be undertaken to advance the work on good practices in policies and measures (FCCC/SBSTA/2002/7, paras. 51–55). In the context of that agenda item, the SBSTA may wish to decide how to further methodological work on policies and measures. Alternatively, a distinction could be made between possible work programmes relating to methodological issues and consideration of other policy and measure issues.

4. Assessing mitigation and adaptation technologies

30. There are several different methodological challenges in the area of mitigation and adaptation technologies. These include methods to estimate mitigation pathways and environmental consequences, "top-down" and bottom-up" methods to estimate costs, and methods to assess specific technologies. Generally, Parties, including their research institutions, use and exchange information on the former two directly or publish in the scientific literature, with the results compiled by the IPCC. Heretofore, the SBSTA has not considered what, if any, aspects of such methods it may wish to consider. Should information on such methods be compiled, compared and made more transparent? When would such information be needed to further the implementation of the Convention?

31. The assessment of specific technologies is a different matter. Such assessments may be made at a national level, before or in conjunction with an assessment of policy options. Assessments can also be done at the local level by businesses and officials selecting/approving different types of facilities and hardware. Many different models and methods are available, depending on the nature of the decision to be made. Recently, the secretariat made available information on methods to assess technologies on the technology page of its web site.[6] The SBSTA, with the support of the Expert Group on Technology Transfer (EGTT), may wish to consider further the need for, the nature of, and customers for, methodologies in this area.

5. Assessing the impacts, vulnerability and adaptation of climate change

32. All Parties need transparent and accurate methods to assess impacts, vulnerabilities and adaptation options. To ensure that Parties have such methods, there is a need to share experience, evaluate, develop, improve and disseminate information, and train experts on methods. In this context, developing countries have special needs.

33. Two distinct sets of activities have been initiated by the SBI and the SBSTA in the area of impacts, vulnerability and adaptation: activities of the SBI relating to specific needs of developing and least developed countries under Article 4.8 and 4.9, and activities of the SBSTA relating to methodologies for assessing vulnerability and adaptation, which are applicable to all Parties. Each of these sets of activities fills a unique niche, but neither is comprehensive regarding its aims, scope or sectors and neither is actively aiming to promote the development, refinement and improvement of such methodologies. Indeed, few assessments have applied and compared several similar methods to a sector/country or compared a single method across countries.

34. Consideration should be given to the long-term goals for work in this area, how the activities of both bodies can be made more coherent, how/whether the SBSTA could support the unique needs of the SBI, whether an effort should be made to evaluate and test existing methods, and the products to be developed over the next three to five years. In this context, the SBSTA may wish to consider the possible roles of other organizations and the secretariat.

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[6] See http://ttclear.unfccc.int

Annex

AREAS OF WORK

	VULNERABILITY AND ADAPTATION
Mandates	The COP, by its decision 9/CP.3 requested the secretariat to accelerate the development of methodologies for assessing adaptation technologies, in particular decision tools to evaluate alternative adaptation strategies. In responding to this mandate, the secretariat has established two objectives: (a) to enhance the dissemination of information on methods, particularly for use by developing countries in vulnerability and adaptation assessments for national communications; and (b) to promote efforts to improve the quality of methodologies.
Background	The secretariat has undertaken a number of activities, including the preparation of an initial compendium of decision tools to evaluate adaptation strategies. Further, Parties, international organizations and others have provided information on adaptation methods and decision tools, which the secretariat has placed on its web site Following a request from SBSTA 13, the secretariat organized a workshop in June 2001, with participation of experts from the IPCC and the user community, to explore: the experience of developing countries with adaptation tools and methodologies; the current state of the art methodologies identified in the Third Assessment Report (TAR) of the IPCC and how these apply to the specific circumstances of developing countries; and options for improving the quality and dissemination of information on impact and adaptation methodologies. The SBSTA, at its fifteenth session, adopted conclusions supporting the conclusions of the Sainte Adèle workshop and noted that more scientific work should be done in the area of improving and developing the methodologies for assessing impacts and adaptation. It also requested the secretariat to consult with other United Nations bodies and organizations on how to enhance the development and assessment of methods and tools for evaluating impacts and adaptation, and to hold an initial workshop before SBSTA 17 to explore the means of supporting the development and dissemination of methods and tools. This workshop has been delayed pending the availability of funds.
Options relating to future work	The secretariat will: continue work on the collection and dissemination of information with a focus on methods and tools useful for conducting vulnerability and adaptation assessments in accordance with new guidelines for non-Annex I national communications, which are expected to be adopted by the COP at its eighth session, taking into account the findings of the TAR and information from UNDP and other organizations. The secretariat could also develop a long-term programme of work, taking into consideration activities under Article 4.8 and 4.9 and those under way in the United Nations organizations, for consideration by the SBSTA at future sessions.

	ARTICLE 4.8 **Addressing the specific needs and concerns of developing country Parties arising from the adverse effects of climate change**
Mandates	Article 4.8 of the Convention; and decision 5/CP.7. Article 4.1 (b), (e) and (f), and 4.4 of the Convention; and decisions 2/CP.7, 6/CP.7 and 7/CP.7.
Background	In decision 5/CP.7, the COP acknowledged the following: (a) The existence of uncertainties in assessing the adverse effects of climate change; (b) That action relating to adaptation needs to follow an assessment and evaluation process based on national communications and other sources; (c) The importance of the secretariat's work in compiling and disseminating information on methods and tools for evaluating impacts and adaptation strategies. To this end, the COP identified a number of activities, at the national and regional levels, relating to information and methodologies to support vulnerability and adaptation assessments. These are covered in paragraph 7 (a) and (b) of decision 5/CP.7. They are to be funded through the Global Environment Facility and other bilateral and multilateral sources. The COP further decided to consider insurance-related actions to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change.
Current activities	The secretariat held a workshop on the status of modeling activities, with the aim of assessing the extent to which these activities have succeeded in supporting the process of assessment of adverse effects of climate change, particularly at the national and regional levels, as well as the extent of participation of developing-country expertise in this methodological work. The secretariat is also preparing to hold two workshops to initiate the integration of insurance issues into the vulnerability and assessment discourse, and one workshop to explore synergistic action among multilateral environmental agreements.
Options relating to future work	The secretariat will further address the evolving linkages among different vulnerability and assessment related issues across programmes inside the secretariat as well as with external entities, with the aim of achieving a common understanding of how methodological aspects relating to the assessment of developing country needs are being handled, and of ensuring consistency and coherence of relevant efforts. The secretariat will draw upon information provided in national communications as well as other relevant sources to support its work on reporting progress on vulnerability and assessment activities included under decision 5/CP.7, once support for these activities has been established.

	ARTICLE 4.9 **Addressing the specific needs and special situations of the least developed countries**
Mandates	Article 4.9 of the Convention; and decisions 5/CP.7, 27/CP.7, 28/CP.7 and 29/CP.7. Article 4.1 (b), (e) and (f), 4.4 and 4.8 of the Convention; decisions 2/CP.7, 6/CP.7 and 7/CP.7; and document FCCC/SBI/2002/5.
Background	By its decision 28/CP.7, the COP adopted guidelines for the preparation of national adaptation programmes of action (NAPAs) for the least developed countries (LDCs) The COP also established an LDC Expert Group (LEG) to advise on the preparation and implementation strategy of NAPAs by LDCs.
Current activities	In fulfilment of its mandate, the LEG, with support of the secretariat, is currently preparing annotations to the NAPA guidelines, in order to eliminate any ambiguities or uncertainties in interpretation that LDCs may face in following the guidelines. The LEG is further conducting an assessment of the NAPA methodology through producing two simulated NAPAs in accordance with the guidelines. This will enable the LEG to identify any potential inconsistencies or difficulties in following the guidelines and proposed amendments for the review, and possible revision, of the guidelines, which is envisioned to take place at COP 8. One important aspect of work on the NAPA methodology relates to the elaboration of methods for prioritizing urgent adaptation activities in LDCs. The LEG is currently assessing the different options available in this context (e.g. cost-benefit analysis and multi-criteria analysis).
Options relating to future work	As the concept of NAPA was initially modeled on the methodology of the United Nations Convention to Combat Desertification (CCD) – National Action Plan, strong linkages with the CCD process are envisaged. The NAPA guidelines also underline the linkage with the Convention on Biological Diversity (CBD) – National Biodiversity Strategy and Action Plans. The LEG, with support from the secretariat, intends to draft a paper outlining ways and means of enhancing synergies between multilateral environmental agreements, for future dissemination to LDC Parties. The NAPA guidelines further emphasize mainstreaming into national sustainable development strategies. The LEG, with support from the secretariat, intends to draft a paper outlining how best to approach this issue, for dissemination to LDC Parties. At COP 8, a review, and possible revision, of the NAPA guidelines will take place, based on submissions from Parties and input from the LEG. As the LDC Fund becomes operational in the context of implementing activities proposed through the NAPAs, a means to prioritize across NAPAs will need to be devised, in order to optimize the use of limited financial resources and to fulfil the most urgent of the needs of the LDC Parties.

	INVENTORIES **Reporting and review of GHG inventories of Annex I Parties**
Mandates	Articles 4 and 12 of the Convention; and decisions 3/CP.1, 4/CP.1, 9/CP.2, 3/CP.5, 6/CP.5 and 34/CP.7.
Background	The International Negotiation Committee (AC/237/45) approved the first guidelines for the preparation of national communications, including GHG inventories, in 1995, even before the entry in force of the Convention. Later the SBSTA elaborated more comprehensive guidelines, which were adopted by decision 9/CP.2 in 1996. The guidelines benefited greatly from the work of the IPCC on greenhouse gas inventories. The need of a more complete and transparent reporting of GHG inventories and a process for their technical review was identified by Parties on the basis of the experience using these guidelines and bearing in mind the requirements of the Kyoto Protocol. In 2000, Parties decided to elaborate more detailed guidelines and separated them in two parts: one for reporting GHG inventories (decision 3/CP.5) and one for the other parts of the national communications (decision 4/CP.5). Guidelines for the technical review of GHG inventories also were adopted that year (decision 6/CP.5). A trial period for assessing the experience in using reporting and review guidelines on GHG inventories was established. The SBSTA, at its sixteenth session, agreed upon a revision of the GHG inventories reporting and review guidelines. This revision results from the experience gained by Parties, review experts and the secretariat during the trial period. It incorporates the use of the IPCC Good Practice Guidance. It is expected that the COP at its eighth session will adopt this revised version of the guidelines.
Current activities	During the trial period, the secretariat has coordinated 22 expert review teams, which reviewed 50 national inventories through centralized, desk and in-country reviews. An additional 12 inventories will be reviewed before the end of 2002. From 2003, the inventories of all Annex I Parties will be reviewed annually. Heretofore, the technical reviews of GHG inventories have constituted a valuable input for the improvement of the methods for preparing, reporting and reviewing the inventories. The secretariat is also preparing to initiate relevant training to ensure the necessary competence of review experts through electronic learning and a workshop. Also, the secretariat has developed a database and associated software to store and assess data submitted by Parties and to support the technical review process.
Options relating to future work	The secretariat will assess ways to improve GHG inventories by undertaking analysis of methods used in individual sectors. It will continue to develop the GHG emission database for supporting the assessment of the GHG emission trends and any related methodological analysis. The secretariat will draw upon information provided in national inventories, and review reports and sectoral analysis to provide relevant information for any revision of the IPCC 1996 Revised Guidelines for National GHG Inventories.

	NON-ANNEX I COMMUNICATIONS
Mandates	The COP, by its decision 8/CP.5, established a Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE), with the objective of improving the process of preparation of national communications by non-Annex I Parties. The CGE is mandated to: (a) identify the difficulties encountered by non-Annex I Parties in the use of the IPCC methodologies and other models, and make recommendations for improvement where appropriate; (b) identify the analytical and methodological issues, including technical problems, in the preparation and reporting of GHG inventories, in particular with respect to the improvement of data collection, the development of local and regional emission factors and activity data, and the developments of methodologies where appropriate, with a view to enhancing the quality of future inventories; (c) examine national communications, in particular GHG inventories, with a view to arriving at recommendations on ways of overcoming difficulties in the use of the IPCC methodologies and the UNFCCC guidelines.
Background	At COP 7, the CGE provided a report that summarized the conclusions and recommendations of four workshops and the analysis of 50 initial national communications submitted at that time. Recommendations for improvement of the IPCC guidelines and other models can be found in paragraphs 33 and 34 of document FCCC/SBI/2002/15. The CGE has also provided inputs for the improvement of the current guidelines for the preparation of national communications.
Current activities	The mandate of the CGE was extended at COP 7. The CGE has examined information contained in 79 national communications. According to its extended mandate, it will also take into consideration problems (some could be methodological) encountered by countries that have not yet submitted their national communications. A report containing results of the work of the CGE for 2000–2003 will be submitted for consideration by the SBI at its seventeenth session. The SBI at its seventeenth session will consider revisions to the guidelines for preparation of national communications from non-Annex I Parties. The revisions take into account information in the compilation and synthesis report (FCCC/SBI/2001/14) and recommendations from the CGE.
Options relating to future work	The CGE has been requested to develop recommendations to the IPCC and other research/scientific institutions. The SBI will need to determine how to consider such recommendations and how to forward them to the IPCC. Depending on the nature of a decision at COP 8 on the proposed revisions to guidelines, additional methodological work may be necessary to support the non-Annex I Parties.

	ARTICLES 5, 7 AND 8 **Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol**
Mandates	Articles 5, 7 and 8 of the Kyoto Protocol refer to the preparation, reporting and review of the information needed to demonstrate the fulfilment of the commitments by the Parties to the Protocol. Among other things, the guidelines and modalities mandated by these articles ensure confidence in the quality and accuracy of a Party's GHG inventory and estimations of assigned amounts, and constitute the foundation of any compliance regime for effective implementation of the Protocol.
Background	Decisions relating to Articles 5, 7, and 8 were adopted at COP 7. These decisions cover: guidelines for national systems under Article 5.1(20/CP.7), good practice guidance and adjustments under Article 5.2 (21/CP.7), guidelines for the preparation of the information required under Article 7 (22/CP.7), modalities for accounting of assigned amounts under Article 7.4 (19/CP.7) and the guidelines for review under Article 8 (23/CP.7). Many elements of these decisions build upon the past methodological work conducted under the Convention. Some elements of these guidelines require additional methodological work. In some cases, the decisions note that there are pending parts that must be completed.
Current activities	Those elements of the guidelines under Article 5, 7 and 8 not completed in Marrakesh will be considered by SBSTA 17, namely the technical guidance on methodologies for adjustments, reporting and review of information on assigned amount and national registries, review for reinstatement of eligibility to use mechanisms, terms of service of lead reviewers, treatment of confidential data by expert review teams, and characteristics of relevant training and subsequent assessment to ensure the competence of the members of the expert review teams. The secretariat is preparing to initiate the review activities under the Kyoto Protocol, in particular the report from Parties relating to the establishment of the assigned amounts.
Options relating to future work	Once experience is gained with the current guidelines, the secretariat will assess and make proposals for consideration by the COP/MOP on how to better implement the provisions of the guidelines under Article 5, 7 and 8, in particular, how to streamline and make more efficient the preparation, reporting and review of the required information.

	MODALITIES FOR THE ACCOUNTING OF ASSIGNED AMOUNTS UNDER ARTICLE 7.4 OF THE KYOTO PROTOCOL
Mandates	Articles 3.10, 3.11, 3.12, 6, 7.4, 12 and 17 of the Kyoto Protocol; decisions 15/CP.7, 16/CP.7, 17/CP.7, 18/CP.7 and 19/CP.7.
Background	Decision 19/CP.7 contains modalities for the accounting of assigned amounts, including in relation to registry requirements and the compilation and accounting of emissions inventories and assigned amounts. By this decision, the COP requested the SBSTA to develop technical standards to ensure the accurate, transparent and efficient exchange of data between national registries, the clean development mechanism (CDM) registry and the transaction log, with a view to recommending a decision on this matter to the COP at its eighth session, for adoption by the Conference of the Parties serving as the meeting of the Parties at its first session. It also requested the Chair of the SBSTA to convene intersessional consultations to prepare technical standards for the consideration of the SBSTA and provide for the exchange of information and experience relating to the development and establishment of registry systems.
Current activities	The current focus of methodological activities under the intersessional consultations on registries is the preparation of draft technical standards to be considered at SBSTA 17, with a view to their adoption by the COP at its eighth session. Consultations were held prior to SBSTA 16. Comments have been subsequently received from Parties on a paper containing draft technical standards by the Chair of the consultations. Further consultations are to be held prior to SBSTA 17.
Options relating to future work	It is envisaged that, once the COP has adopted the technical standards, work will need to continue on the details of their implementation. This work could be progressed in conjunction with the development and establishment of the transaction log and the CDM registry. Work is also envisaged, under decision 19/CP.7, on the development of a standard electronic format for the report upon expiration of the additional period for fulfilling commitments.

	ADJUSTMENTS TO INVENTORIES UNDER ARTICLE 5.2 OF THE KYOTO PROTOCOL
Mandates	The COP, by its decision 21/CP.7, requested the secretariat to organize two workshops on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol. A draft decision on this issue should be forwarded for adoption by the COP at its ninth session, with a view to recommending, at that session, such technical guidance for adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session. At the same session, the COP also decided to develop technical guidance on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol for estimates of emissions and removals from land use, land-use change and forestry, immediately after completion of the work of the Intergovernmental Panel on Climate Change on good practice guidance on land use, land-use change and forestry, with a view to adopting a decision on adjustments at its tenth session.
Background	The first workshop on adjustments took place from 3 to 5 April 2002 (see document FCCC/SBSTA/2002/INF.5). The participants of the workshop developed draft technical guidance covering all sectors of the greenhouse gas inventories from Annex I Parties, except for the LUCF sector. The SBSTA, at its sixteenth session, set up a process for testing this technical guidance through simulations of the calculation of adjustments. The SBSTA also decided that the second workshop should be organized in 2003 to assess the results of the testing phase and to refine the draft technical guidance and ensure consistent application of adjustments by the different expert review teams.
Current activities	The secretariat will prepare, for consideration at the seventeenth session of the SBSTA, a proposal for the development of case studies for simulating the calculation of adjustments. The SBSTA encouraged Parties to undertake work on methodologies for adjustments, and to share the outcome of any such work with other Parties and the secretariat by 15 March 2003. See document FCCC/SBSTA/2002/INF.19 for additional details.
Options relating to future work	Technical guidance on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol for estimates of anthropogenic emissions and removals from land use, land-use change and forestry, could be considered by the SBSTA immediately after the Intergovernmental Panel on Climate Change completes its work on good practice guidance on land use, land-use change and forestry.

	LAND-USE, LAND USE CHANGE AND FORESTRY Good practice guidance for LULUCF
Mandates	The COP, by its decision 11/CP.7, requested the IPCC to elaborate methods to estimate, measure, monitor and report changes in carbon stocks and anthropogenic greenhouse gas (GHG) emissions by sources and removals by sinks resulting from land use, land-use change and forestry activities under Article 3, paragraphs 3 and 4, and Articles 6 and 12 of the Kyoto Protocol, on the basis of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (para. 3 (a)). It also requested the IPCC to prepare a report on good practice guidance and uncertainty management relating to the measurement, estimation, assessment of uncertainties, monitoring and reporting of net carbon stock changes and anthropogenic GHG emissions by sources and removals by sinks in the land use, land-use change and forestry sector (para. 3 (b)). This work is to be considered by COP at its ninth session.
Background	At its seventeenth session, the IPCC decided to produce a report on good practice guidance and uncertainty management for the LUCF sector. A planning meeting was held in Geneva from 6 to 8 August 2001 to prepare a draft work programme to address the requests from the COP. The SBSTA, at its fifteenth session, welcomed the work programme proposed by the IPCC relating to the development of good practice guidance for land use, land-use change and forestry. It invited the IPCC to report at its next session and periodically thereafter on the progress of its work related to LULUCF.
Current activities	A first experts/authors meeting was organized by the IPCC in Eisenach, Germany, from 12 to 14 March 2002, with the objective of drafting an outline of the report. The report will consist of five chapters, including a chapter for the consistent representation of land areas and one on the specific requirements resulting from the Kyoto Protocol. A second experts/authors meeting was held in Tampere, Finland, from 10 to 12 July 2002. At this meeting, the experts/authors exchanged views and discussed technical issues relevant to good practice guidance. A draft of the document will be available to lead authors for comments at the end of August 2002.
Options relating to future work	The draft report will be sent to governments and experts for comments between December 2002 and January 2003. The report will be considered for approval by the IPCC at its plenary meeting in the second half of 2003. Subsequently, the SBSTA will need to consider what aspects to incorporate into the guidelines for reporting GHG inventories by Annex I Parties and into methodologies for adjustments under Article 5.2 of the Protocol.

	LAND-USE, LAND USE CHANGE AND FORESTRY **Afforestation and reforestation project activities under Article 12 in the first commitment period**
Mandates	The COP, by its decisions 11/CP.7 (para. 2 (e)) and 17/CP.7 (para. 10 (b)), requested the SBSTA to develop definitions and modalities for including afforestation and reforestation project activities under Article 12 in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to draft decision -/CMP.1 (LULUCF) with the aim of adopting a decision on these definitions and modalities at the ninth session of the COP, to be forwarded to the Conference of the Parties serving as the meeting of the Parties at its first session.
Background	In response to a request by the COP, the secretariat organized a workshop in Orvieto, Italy, from the 7 to 9 April 2002, to develop terms of reference and an agenda for the work to include afforestation and reforestation project activities under Article 12 in the first commitment period. The SBSTA, at its sixteenth session, agreed on the terms of reference and an agenda for the work as contained in document FCCC/SBSTA/2002/L.8.
Current activities	The secretariat produced a note cross-referencing decisions 11/CP.7, 17/CP.7, 19/CP.7, 22/CP.7 and 23/CP.7 to the issues identified in paragraph 1 (a) and (c) of the terms of reference. This note is contained in document FCCC/SBSTA/2002/INF.11. In addition, Parties and other organizations were invited to submit, by 20 August 2002, their views on issues related to modalities. Submissions from Parties are compiled in document FCCC/SBSTA/2002/MISC.22 and those from organizations in a web-only document FCCC/WEB/2002/12.
Options relating to future work	In accordance with the agreed terms of reference and agenda for work, the secretariat, under the guidance of the SBSTA Chair, will prepare three options papers on: (a) non-permanence; (b) baselines, additionality and leakage; and (c) socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems. These documents will be available in December 2002. Also, in February 2003, the secretariat will organize a workshop to facilitate an exchange of views on issues relating to modalities. Between March and April 2003, the secretariat, under the guidance of the SBSTA Chair, will prepare a draft consolidated text for consideration by the SBSTA at its eighteenth session. If needed, intersessional consultations will be convened between June and November 2003 for the consideration of issues contained in the draft negotiating text for the annex.

	LULUCF **Other issues: human-induced effects, definitions and harvested wood products**
Mandates	The COP by its decision 11/CP.7 requested: (a) the IPCC to develop practicable methodologies to factor out direct human-induced changes in carbon stocks and greenhouse gas (GHG) emissions by sources and removals by sinks from changes in carbon stocks and GHG emissions by sources and removals by sinks due to indirect human-induced and natural effects, and effects due to past practices in forests (pre-reference year), to be submitted to the COP at its tenth session (para. 3 (d)). It requested the SBSTA to incorporate this work into any revisions of modalities, rules and guidelines prior to the second commitment period, for the accounting of activities under Article 3.4 of the Kyoto Protocol (para. 2 (c)). (b) the IPCC to develop definitions for direct human-induced 'degradation' of forests and 'devegetation' of other vegetation types and methodological options to inventory and report on emissions resulting from these activities (para. 2 (c)), and the SBSTA, following the completion of this methodological work, to consider and adopt methodologies to account for anthropogenic GHG emissions resulting from direct human-induced degradation and devegetation activities (para. 2 (a)). (c) the SBSTA to investigate the possible application of biome-specific forest definitions for the second and subsequent commitment periods with a view to the COP, at its tenth session, recommending a decision for adoption on the use of such biome-specific forest definitions for future commitment periods to the Conference of the Parties serving as the meeting of the Parties at its first session (para. 2 (b)). In the same decision, the COP decided that any changes to the treatment of harvested wood products should be in accordance with future decisions of the COP (para. 4).
Background	The IPCC has developed a work programme to respond to the above requests, which were included together with the requests on good practice guidance for LULUCF. The secretariat made available a technical paper on biome-specific forest definitions, in document FCCC/TP/2002/1. The SBSTA encouraged those Parties interested in accounting for emissions from harvested wood products to continue their work and informal collaboration on aspects of this topic, and welcomed any future input from Parties regarding new insights and findings.
Current activities	The IPCC organized a first experts/authors meeting on definitions for direct human-induced degradation of forests and devegetation of other vegetation types in Tampere, Finland, from 10 to 12 July 2002.
Options relating to future work	A first experts/authors meeting on the development of practicable methodologies to factor out direct human-induced changes in carbon stocks will take place in Geneva, Switzerland, from 16 to 18 September 2002, with the objective of producing an outline of the report. The second experts/authors meeting on definitions for human-induced degradation of forests and devegetation of other vegetation types will take place in Rio de Janeiro, Brazil, from 2 to 4 October 2002. A draft report will be sent to governments and experts for comments between December 2002 and January 2003. It is expected that the IPCC will finalize its work on methodologies and on definitions in accordance with decision 11/CP.7, by COP 9 and COP 10, respectively. The possible application of biome-specific forest definitions will be considered by the SBSTA prior to COP 10. The SBSTA will further consider harvested wood products accounting and reporting at its twentieth and twenty-first sessions. Parties are invited to submit, by 15 January 2003, views on implications of harvested wood products accounting, including views on different approaches and methodologies.

	EMISSIONS FROM INTERNATIONAL AVIATION AND MARITIME BUNKER FUELS
Mandates	Article 2.2 of the Kyoto Protocol; and decisions 4/CP.1, 9/CP.2, 2/CP.3, 3/CP.5 and 18/CP.5.
Background	Emissions from international aviation and maritime bunker fuels are estimated by Parties as part of their national greenhouse gas (GHG) inventories, but are reported separately from their national total emissions. This provision was stipulated in the first guidelines for the preparation of national communications, including GHG inventories, in the guidelines adopted by decisions 9/CP.2 in 1996 and 3/CP.5 in 1999 as well as in decision 2/CP.3 in 1997. Also, emissions from this sector are not subject to the quantified emission limitation and reduction commitments established under the Kyoto Protocol. Parties shall pursue limitation and reduction of GHG from aviation and maritime bunker fuels by working through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO). The SBSTA, at its tenth session, noted that further methodological work was needed to ensure consistent and transparent inventories, including the development and use of consistent definitions, taking into account any guidance by the IPCC on good practice. The SBSTA requested ICAO and IMO to make available their data and expertise on the issue, and invited Annex I Parties to provide, in a transparent manner, emission data and information on methods used to estimate emissions, including the definitions applied, as part of their annual GHG inventory. At its eleventh session, the SBSTA requested the secretariat to further explore ways and means of cooperating with ICAO and IMO and to promote mutual understanding of common activities and interests, including cooperation on methodological issues in order to improve inventory reporting, and side events to provide the opportunity for delivery of, inter alia, detailed status reports. The SBSTA, at its fifteenth session, noted the information provided by the IPCC regarding aspects of the IPCC Good Practice Guidance relating to the reporting of emissions from fuel used in international aviation and maritime transportation. It also invited ICAO and IMO, in consultation with the secretariat, to explore opportunities for examining and improving the quality of data reporting and comparability under the relevant provisions of the Convention and the Kyoto Protocol, and under ICAO and IMO.
Current activities	The secretariat is participating actively in meetings of the Committee on Aviation Environmental Protection (CAEP) and the Marine Environment Protection Committee (MEPC) that deal with emissions from international aviation and maritime transportation and is cooperating with the secretariats of both the ICAO and IMO.
Options relating to future work	The secretariat will draw upon information provided in national GHG inventories and in review reports, to provide relevant information to both ICAO and IMO for further consideration. Methodological aspects related to this matter will be considered by the SBSTA at its eighteenth session.

	DEVELOPMENT AND TRANSFER OF TECHNOLOGY
Mandates	By its decision 9/CP.3 the Conference of Parties requested the secretariat to continue its work on synthesis and dissemination of environmentally sound technologies and know-how conducive to mitigating, and to adapting to, climate change, for example, by accelerating the development of methodologies for adaptation technologies, in particular decision tools to evaluate alternative adaptation strategies. At its fifteenth session, the SBSTA requested the secretariat to continue its work on the technology information system. By its decision 4/CP.7, the COP requested the Chair of the SBSTA to identify methodologies needed to undertake technology needs assessments and to report findings to the SBSTA at its sixteenth session (FCCC/CP/2001/13/Add.1, annex, para.7).
Background	In response to these mandates the secretariat has designed and developed a web-based prototype technology transfer information system/clearing house (TT:CLEAR), which makes available on the Internet an inventory of methods, models and tools that have been or could be used to analyse mitigation or impacts and adaptation options, measures and strategies. Information on the main characteristics and capabilities of the methods/models/tools may prove useful for developing countries. The methods/models/tools on the web site were selected because they are available at low or no cost, run on personal computers, have been used for assessing and comparing technologies for supporting the technology transfer decision-making process, and are supported by training programmes. The list is preliminary and is not exhaustive. The models were not tested by the secretariat. The information is based on published documents and communications from the developers. The secretariat technology information system also includes more than 600 links to different Internet sites, including many sites dealing with different climate change methodologies. An expert meeting on methodologies for technology needs assessments, jointly organized by the secretariat and the United Nations Development Programme – Global Environment Facility (UNDP–GEF) support programme, took place from 23 to 25 April 2002. The recommendation may be found in document (FCCC/SBSTA/2002/INF.7).
Current activities	The secretariat initiated a peer review of the information on methods, models and tools included in TT:CLEAR. Within this activity, the secretariat invited the custodians of the methods, models and tools to review and update the information, provide additional information on case studies using these tools, and provide information on different events such as training courses and workshops. The secretariat is cooperating with the UNDP and the Climate Technology Initiative (CTI) in their planned activities to develop a simplified and user-friendly handbook on methodologies for technology needs assessments. A working paper on "Tools and methodologies in assessing technology needs" is available.
Options relating to future work	The technical paper "Technology transfer clearing house and international information network - Proposal for activities" (FCCC/SBSTA/2001/2) indicates that future developments of TT: CLEAR may include the design, testing and dissemination of simple tools for technology assessment and comparison (TT: TOOLS). They could include, depending on future guidance by the SBSTA and available resources, tools to assess technologies and estimate their performances in country-specific situations, and to compare different technologies in terms of their cost-effectiveness in mitigating greenhouse gas emissions.

	THE UNIFORM REPORTING FORMAT FOR ACTIVITIES IMPLEMENTED JOINTLY UNDER THE PILOT PHASE
Mandates	Article 4.2(a) and (d) of the Convention; and decisions 5/CP.1, 10/CP.3, 1/CP.4, 6/CP.4, 13/CP.5 and 8/CP.7.
Background	By its decision 5/CP.1, the COP decided to establish a pilot phase for activities implemented jointly (AIJ), under which Parties may implement projects that reduce greenhouse gas emissions or enhance removals of greenhouse gases by sinks, in addition to what would have occurred otherwise. It further decided that a framework for reporting on AIJ should be established. In the context of the above-mentioned decisions, methodological work is focused on a uniform reporting format (URF). This was adopted by the COP by its decision 10/CP.3, which also invited Parties to report in accordance with the URF and set up a process for its future revision. A draft revised URF was prepared by the secretariat and presented at COP 5. An improved version, taking into account comments from Parties and including draft guidelines for its use, was considered at SBSTA/SBI 13, part one. A further version was considered by SBSTA 16, which recommended a decision, containing a draft revised URF, to COP 8 for adoption.
Current activities	The draft revised URF contained in document FCCC/SBSTA/L.2/Add.1, forwarded by SBSTA 16, will be before COP 8 for its consideration and adoption, as appropriate.
Options relating to future work	No further work on the URF is currently planned.

	WORK OF THE ARTICLE 6 SUPERVISORY COMMITTEE
Mandates	Article 6 of the Kyoto Protocol; and decision 16/CP.7.
Background	In accordance with decision 16/CP.7 and the annex on guidelines for the implementation of Article 6 of the Kyoto Protocol, the Article 6 supervisory committee is to be established by the Conference of the Parties serving as the meeting of the Parties at its first session (COP/MOP 1) to supervise, inter alia, the verification of the emission reduction units generated by Article 6 projects. In this context, methodological work is to focus on the review and revision of reporting guidelines and criteria for baselines and monitoring, and the elaboration of the project design document. This work is to give consideration to relevant work of the Executive Board of the clean development mechanism, as appropriate.
Options relating to future work	The work of the Article 6 supervisory committee will begin after its establishment at COP/MOP 1.

	WORK OF THE EXECUTIVE BOARD OF THE CLEAN DEVELOPMENT MECHANISM
Mandates	Article 12 of the Kyoto Protocol; and decision 17/CP.7.
Background	The COP, by its decision 17/CP.7, decided to facilitate the prompt start of the clean development mechanism (CDM) by adopting its modalities and procedures. The COP further elected the Executive Board, which is to supervise the CDM under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties (COP/MOP), and be fully accountable to the COP/MOP. The Executive Board is to report on its activities to each session of the COP/MOP. For the purposes of decision 17/CP.7, and in accordance with that decision, the COP assumes the responsibilities of the COP/MOP until COP/MOP 1. In the context of decision 17/CP.7, and of the annex on modalities and procedures, methodological work is focused on the approval of new methodologies relating to, inter alia, baselines, monitoring plans and project boundaries and the development, maintenance and public availability of a repository of approved rules, procedures, methodologies and standards. The Executive Board is also to identify modalities for seeking collaboration with the SBSTA on methodological and scientific issues.
Current activities	A panel has been established by the Executive Board to develop recommendations on guidelines for methodologies for baselines and monitoring plans. The project design document is being finalized and is to be made available, in all official United Nations languages, prior to COP 8. Members of the Executive Board have been designated to follow work undertaken by the SBSTA on developing definitions and modalities for including afforestation and reforestation project activities under the CDM in the first commitment period, and the development of technical standards for registry systems.
Options relating to future work	It is envisaged that the Executive Board will continue to carry out the activities outlined above, in accordance with decision 17/CP.7 and its annex on modalities and procedures.

	ASSESSMENT OF CONTRIBUTIONS TO CLIMATE CHANGE
Mandates	During the negotiations of the Kyoto Protocol, the delegation of Brazil presented an approach for distributing the burden of emissions reductions among Annex I Parties based on the effect of their cumulative historical emissions from 1840 on the global average surface temperature (FCCC/AGBM/1997/MISC.1/Add.3). The scientific and methodological aspects of the proposal were referred to the SBSTA for further consideration.
Background	The SBSTA, at its fifteenth session, encouraged Parties to pursue and support the research effort on the scientific and methodological aspects of the proposal by Brazil as recommended in the report of the expert meeting (document FCCC/SBSTA/2001/INF.2) and to communicate such activities to the secretariat. The SBSTA also requested the secretariat to continue to coordinate the review of this proposal, to facilitate the dissemination of scientific and methodological information on this proposal, to organize an expert meeting to share information on the development of the scientific and methodological aspects of the proposal by Brazil, to broaden participation and to build scientific understanding of this subject before its seventeenth session (November 2002).
Current activities	The secretariat, with the cooperation of the University of East Anglia and the Hadley Centre in the United Kingdom, will organize an expert meeting on this subject from 25 to 27 September 2002. Additional information may be found on the following web site: http://www.cru.uea.ac.uk/unfccc_assessment/
Options relating to future work	A report of the above-mentioned workshop will be provided to the SBSTA for consideration at its seventeenth session. It is likely that the report will contain suggestions for future work.